

In re Edmond
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Amendments to the Specification:

Please add the following new paragraphs after Paragraph [0006]:

[0006.1] Summary:

[0006.2] The invention is a light emitting diode comprising a silicon carbide wafer having a first and second surface and having a predetermined conductivity type and an initial carrier concentration. A region of implanted dopant atoms extends from the first surface into the silicon carbide wafer for a predetermined distance, the region having a higher carrier concentration than the initial carrier concentration in the remainder of the wafer. A conductive buffer region is on the first surface of the conductive silicon carbide wafer, an active region is on the conductive buffer region, a first ohmic contact is on said active region, and a second ohmic contact is on the second surface of the silicon carbide wafer.

[0006.3] Brief Description of the Drawings:

[0006.4] Figure 1 is a simplified schematic of a silicon carbide based light emitting diode according to the present invention.

[0006.5] Figure 2 is a schematic illustration of a method of fabricating structures according to the present invention.

[0006.6] Figure 3 is another schematic illustration of a method of fabricating structures according to the present invention.

[0006.7] Figure 4 is a plot of the profile of implanted ions as a function of depth from the surface for a substrate according to the present invention.

[0006.8] Figure 5 is another schematic illustration of the desired depth profile that can be formed according to an embodiment of the invention.

[0006.9] Figure 6 is a plot of interfacial voltage at the substrate/buffer interface versus 25 keV implant dose for implanted substrates according to the invention..